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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/731,915	12/10/2003	William S. Woods	899.009US2	5791

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EXAMINER	
CHAU, COREY P	

ART UNIT	PAPER NUMBER
2644	

DATE MAILED: 02/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/731,915	WOODS, WILLIAM S.	
	Examiner	Art Unit	
	Corey P. Chau	2644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *14 November 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-49* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-49* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *11/14/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Double Patenting

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington,* 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1 and 3-8 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 2-7 of copending Application No. 09/393463 in view of "Feedback Cancellation in Hearing Aids: Results from a Computer Simulation", by Kates. Claim 2 of application no. 09/393463 discloses a method of processing at least one audio signal, comprising: filtering a processed signal (i.e. processing an input audio signal having one or more feedback components associated with an acoustic feedback path to provide a processed signal) by a notch filter to form a filtered signal; and sending a subaudible narrowband signal having a first bandwidth into the filtered signal to form a probe signal to probe a feedback path having a second bandwidth (i.e. generating a subaudible probe signal using the processed signal and the detected feedback component). Claim 2 of application no. 09/393463 does not expressly disclose detecting a feedback

component of the one or more feedback components in the input audio signal; feeding forward the generated narrowband subaudible probe signal to an output for the processed signal to probe the acoustic feedback path with an acoustic subaudible probe signal; and adjusting a feedback-inhibiting filter using the narrowband subaudible probe signal to inhibit the feedback component in the input audio signal. Kates discloses detecting a feedback component (i.e. feedback detection) of the one or more feedback components in the input audio signal (column 7, paragraphs 1-3); feeding forward the generated probe signal to an output for the processed signal to probe the acoustic feedback path with an acoustic probe signal (Fig. 4); and adjusting a feedback-inhibiting filter using the probe signal to inhibit the feedback component in the input audio signal (Fig. 4; column 7, paragraph 4 to column 9, paragraph 3) in order to disengage the normal hearing-aid system when the feedback detection determines if a sinusoid having power above a preset threshold is present at the microphone to inhibit the feedback. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify application no. 09/393463 to incorporate a feedback detection in order to disengage the normal hearing-aid system when the feedback detection determines if a sinusoid having power above a preset threshold is present at the microphone to inhibit the feedback. Therefore, application no. 09/393463 as modified discloses detecting a feedback component of the one or more feedback components in the input audio signal (Kates, Fig. 4); feeding forward the generated narrowband subaudible probe signal to an output for the processed signal to probe the acoustic feedback path with an acoustic subaudible probe signal; and adjusting a

feedback-inhibiting filter using the narrowband subaudible probe signal to inhibit the feedback component in the input audio signal.

3. Claims 2-7 of application no. 09/393463 falls entirely within the scope of the instant Claims 3-8 or, in other words Claims 2-7 of application no. 09/393463 are obvious over the instant Claims 3-8.

4. Claims 1, 2, and 9-16 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 36-39, and 46-50 of copending Application No. 09/393463 in view of "Feedback Cancellation in Hearing Aids: Results from a Computer Simulation", by Kates. Claim 1 of application no. 09/393463 discloses a method of processing audio signals, comprising: inhibiting at least one feedback component of an input audio signal by adjusting a feedback-inhibiting filter using a narrowband subaudible probe signal (i.e. feeding forward the generated narrowband subaudible probe signal to an output for the processed signal to probe the acoustic feedback path with an acoustic subaudible probe signal and adjusting a feedback-inhibiting filter using the subaudible probe signal to inhibit the feedback component in the input audio signal). Claim 36 of application no. 09/393463 discloses generating a probe signal to provide the narrowband subaudible probe signal (i.e. generating a subaudible probe signal using the processed signal and the detected feedback component). Claim 1 of application no. 09/393463 does not expressly disclose detecting a feedback component of the one or more feedback components in the input audio signal. Kates discloses detecting a feedback component (i.e. feedback detection) of the one or more feedback components in the input audio

signal (column 7, paragraphs 1-3) in order to disengage the normal hearing-aid system when the feedback detection determines if a sinusoid having power above a preset threshold is present at the microphone to inhibit the feedback. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify application no. 09/393463 to incorporate a feedback detection in order to disengage the normal hearing-aid system when the feedback detection determines if a sinusoid having power above a preset threshold is present at the microphone to inhibit the feedback.

5. Claims 36-39 and 46-50 of application no. 09/393463 falls entirely within the scope of the instant Claims 2 and 9-16 or, in other words Claims 36-39 and 46-50 of application no. 09/393463 are obvious over the instant Claims 2 and 9-16.

This is a provisional obviousness-type double patenting rejection.

6. Claims 17-49 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over **Claims 8-35, and 40-45** of copending Application No. 09/393463. Although the conflicting claims are not identical, they are not patentably distinct from each other because Claims 8-35, and 40-45 of application no. 09/393463 falls entirely within the scope of the instant Claims 17-49 or, in other words **Claims 8-35, and 40-45** of application no. 09/393463 are obvious over the instant Claims 17-49. The **Claims 8-35, and 40-45** of application no. 09/393463 is a broader version of the instant Claims 17-49 and is therefore obvious of the instant Claims 17-49.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Allowable Subject Matter

7. Claims 1-49 are allowable if Applicant overcomes the Double Patenting rejection set forth in the **present** Office Action. Please see Double Patent rejection above.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Corey P. Chau whose telephone number is (571)272-7514. The examiner can normally be reached on Monday - Friday 9:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chin Vivian can be reached on (571)272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

February 6, 2006
CPC

HUYEN LE
PRIMARY EXAMINER